

### **Abstract**

5 A WDM optical system includes first and second WDM's including an optical link therebetween. Each WDM includes circuitry for linking multiplexer and demultiplexer circuitry to a plurality of modular elements. The modular elements include a first set of modules for converting between native protocol media signals and common format signals. A second set of modules converts between the common format signals and optical signals at separate wavelengths for communication with the multiplexers and demultiplexers. A dual path transmit and receive optical link is provided between near and far end WDM's.

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